

TWO NEW LOCALITIES FOR *MEDEOLARIA FARLOWII*
IN NEW ENGLAND

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Heretofore, only three localities have been reported for the distinctive parasite *Medeolaria farlowii* Thaxter. These localities were given by Thaxter (1922) in the paper describing the new genus and species as Magnolia, Massachusetts; Kittery Point, Maine; and Chocorua, New Hampshire. Despite both the widespread occurrence of the host, *Medeola virginiana*, and the peculiarity of the fungus with its resultant hypertrophy, the fungus was known only from these localities. In September, 1970 Richard P. Korf and I collected it again on the hillside near William G. Farlow's former house where Thaxter had made a large collection in 1904. That collection allowed a study which resulted in Korf's (1972) delimitation of the monotypic order Mediolariales and family Mediolariaceae for the monotypic fungus genus *Medeolaria*. Two new localities for this fungus are here reported: in damp mixed woods near Stevens Corner Road, West Newfield, Maine, on the property of Reed and Kathryn Rollins, September 1983; and in mixed woods on Parker Trail, Mt. Monadnock, New Hampshire, October 12, 1983.

I call attention to this intriguing, seemingly rare parasite in hopes that others will look for infected plants to help develop a more complete picture of its distribution. Infected plants are characterized by having shortened, swollen internodes between leaf pseudowhorls. Below the lower pseudowhorl, the stem is thickened and is at first green, later becoming brownish with olive to yellowish-green patches. It is in these patches, which are mostly paraphyses, that asci are found in mature specimens. The asci are thick-walled except at the tip where they become thinned. Each ascus has eight bilaterally asymmetrical ascospores, dark brown at maturity and longitudinally striate. The above details agree with Thaxter's description.

Ascus dehiscence was discussed by Korf (1972) who questioned whether it might not deliquesce rather than split. Study of the large collection from Maine showed empty asci each with a rupture of the apical region. The apical part of the ascus is thin and apparently breaks down at maturity. No spores were released when ascus-bearing portions were suspended above agar.

Many of the swellings had holes which may have been made by foraging insects. This observation suggests that insects might be involved in spore dispersal, which might explain the spotty distribution. Incidence of infection in populations is also of note; in some populations numerous infected plants can be found in close proximity, while in others only single infected plants are found. While this spottiness may have to do with systemic infection in the vegetatively reproducing plants of *Medeola* (growth patterns in *Medeola* were outlined by Bell in 1974), essentially nothing has been worked out regarding the infection cycle of this parasite.

Attempts were made to establish the fungus in culture. It grew slowly out of excised plant tissue and after two days was overtaken by other fungi. No spores were formed by *Medeolaria farlowii* in culture. The hyphae are characteristically hyaline and branch repeatedly at nearly right angles.

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LITERATURE CITED

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